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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,107	04/17/2002	Patrick M. Lechat	F40.12-0001	8286

7590 04/04/2005

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EXAMINER	
COUSO, JOSE L	

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/980,107	LECHAT ET AL.	
	Examiner	Art Unit	
	Jose L. Couso	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) *20-24* is/are allowed.

6)☐ Claim(s) *1-3,5-7,9-16 and 19* is/are rejected.

7)☒ Claim(s) *4,8,17 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/26/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> **(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.**

2. Claims 1-3, 5-7, 9-16 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Tekalp et al. (U.S. Patent No. 6,654,771).

With regard to claim 1, Tekalp describes an image encoding method that for a field corresponding to a least one image portion carries out the following steps: the definition of a minimum triangular partition overlapping said domain (see figure 5 and refer for example to column 7, lines 59-62), the association, with each of said source triangles, of a square matrix representing said source triangle, by means of a first invertible transformation, the application of a second decorrelating invertible transformation to each of said square matrices, delivering transformed matrices (see figure 6 and refer for example to column 10, line 10 through column 12, line 2).

As to claim 2, Tekalp describes the step of associating a square matrix comprises the following steps: the affine transformation of a source triangle into an isosceles rectangular triangle called a reference triangle, the creation of a square matrix whose lower part includes data representing said isosceles rectangular triangle, the symmetrizing of said square matrix (refer for example to column 10, line 10 through column 12, line 2).

In regard to claim 3, Tekalp describes the step for the creation of a square matrix implements a scale factor enabling an expansion or compression in the space domain (refer for example to column 10, lines 49-54).

As to claim 5, Tekalp describes the second transformation belongs to the group comprising: the Karhunen Loeve transformation (KLT), the discrete Fourier transformation (DFT), the discrete cosine transformation (DCT), and the Walsh-Hadamard transformation (WHT) (refer for example to column 16, lines 2-24).

In regard to claim 6, Tekalp describes a step for the quantification (25) and encoding (26) of data of the lower part of the transformed matrix (refer for example to column 17, line 52 through column 18, line 12).

With regard to claim 7, Tekalp describes quantification (25) belongs to the group comprising: a uniform quantification, a zigzag route quantification, the quantification pitch being incremented as and when the route is travelled, a quantification based on at least one weighting matrix that is pre-evaluated or optimized for the processed image (refer for example to column 17, line 52 through column 18, line 12).

In regard to claim 9, Tekalp describes a step of RLE (Run Length Encoding) and entropic encoding of the quantified data (refer for example to column 16, lines 17-19).

With regard to claim 10, Tekalp describes the triangular partition is obtained according to a method that takes account of the contents of the image or the image portion (as clearly illustrated in figures 4-5 and discussed in column 7, lines 57-62).

As to claim 11, Tekalp describes the method advantageously belongs to the group comprising: methods based on fractal decomposition, matching pursuit methods,

methods implementing a DCT; methods implementing an SADCT ("shape Adaptive DCT") (refer for example to column 17, lines 23-51).

With regard to claim 12, Tekalp describes the method is implemented on image portions having a texture whose representation error is above a given threshold(refer for example to column 17, line 58 through column 18, line 26).

In regard to claim 13, Tekalp describes the representation error corresponds to a luminance deviation between said source triangle and the triangle after reconstruction (refer for example to column 10, line 10 through column 12, line 47, the temporal gradient in Tekalp corresponds to applicant's luminance).

With regard to claim 14, Tekalp describes the method is implemented on an error image corresponding to the deviation between the source image and an approximate image, obtained by implementing a preliminary distinct method of encoding (refer for example to column 17, line 58 through column 18, line 26).

As to claim 15, Tekalp describes preliminary method of encoding is a method of approximation by refining that implements a hierarchical mesh from which a quaternary tree is constructed having as many levels as there are levels in said hierarchical mesh, each of said levels having a number of nodes equal to the number of triangles in the corresponding mesh level, and in that, for nodes meeting a predetermined criterion, the preliminary encoding is advantageously replaced by the encoding as above (refer for example to column 10, line 10 through column 12, line 47).

In regard to claim 16, Tekalp describes the predetermined criterion relies on the luminance deviation between the triangle of the approximate image and that of the

source image (refer for example to column 10, line 10 through column 12, line 47, the temporal gradient in Tekalp corresponds to applicant's luminance).

In regard to claim 19, Tekalp describes the luminance deviation represents a mean squared error or an absolute error between said source triangle and the corresponding approximate triangle (refer for example to column 10, line 10 through column 12, line 47, the temporal gradient in Tekalp corresponds to applicant's luminance).

3. Claims 20-24 are allowed.

4. Claims 4, 8 and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is an examiner's statement of reasons for allowance: The prior art of the record fail to teach or suggest singly and/or in combination as prescribed for in the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose L. Couso whose telephone number is (703) 305-4774. The examiner can normally be reached on Monday through Friday from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8576.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jlc
March 14, 2005

JOSE L. COUSO
PRIMARY EXAMINER